

545OneDrive2_00015274

AMENDMENT 3			
PHASE 1	PHASE 2	PHASE 3	TOTAL
3fuels	3fuels	16fuels	922 carbonyl samples 922 alcohol samples 482 test phases for alcohols / carbonyls
VOCs			
3vehicles 3 phases 1 background 2 tests		3vehicles 3 phases 1 background 2 tests	
24 samples per fuel 5% contingency 26 total with contingency 19 test phases per fuel		24 samples per fuel 5% contingency 26 total with contingency 19 test phases	
16vehicles 1 phase 1 background 1 test		16vehicles 1 phase 1 background 1 test	
32 samples per fuel 16 test phases per fuel		32 samples per fuel 16 test phases	
58 total samples per fuel 35 total test phases per fuel		58 total samples per fuel 35 specified test phases per fuel	
174 specified VOC samples 105 specified test phases		928 specified VOC samples 560 specified test phases	
additional alcohols / carbonyls			
16vehicles 1 phases 1 background 1 test	3vehicles 3phases 1 BG 2 tests	16vehicles 1 phases 1 background 1 test	
32 samples per fuel 5% contingency 34 total with contingency 17 test phases per fuel	24 samples per fuel 5% contingency 26 total with contingency 19 test phases	32 samples per fuel 5% contingency 34 total with contingency 17 test phases per fuel	
alcohols / carbonyls			
16vehicles 1 phase 1 BG 2 test	64 samples per fuel 5% contingency 68 total with contingency 34 test phases per fuel		
94 total samples per fuel 53 test phases per fuel			
282 carbonyl samples 96 alcohol samples 51 test phases for alcohols / carbonyls	282 carbonyl samples 282 alcohol samples 159 test phases for alcohols / carbonyls	544 carbonyl samples 544 alcohol samples 272 test phases for alcohols / carbonyls	
EX. 4 - CBI			

Version 1: This version assumes that in Phases 1 and 3 of the program VOC speciation is done whenever alcohol and carbonyl emissions are measured. Phase 2 remains unchanged relative to the original version.

AMENDMENT 3			
PHASE 1	PHASE 2	PHASE 3	TOTAL
VOCs	3fuels	15fuels	
	3vehicles	3vehicles	
	3phases	3phases	
	1background	1background	
	2tests	2tests	
	24samples per fuel	24samples per fuel	
	5% contingency	5% contingency	
	28total with contingency	28total with contingency	
	19test phases per fuel	19test phases	
	16vehicles	16vehicles	
2tests	1phase	1phase	
	1background	1background	
	24samples per fuel	24samples per fuel	
	5% contingency	5% contingency	
	28total with contingency	28total with contingency	
	19test phases per fuel	19test phases per fuel	
	16vehicles	16vehicles	
	3phases	3phases	
	1BG		
	2tests		
alcohols / carbonyls	3vehicles		1,788 specified VOC samples 1,007 specified test phases
	3phases		
	1BG		
	24samples per fuel		
	5% contingency		
	28total with contingency		
	19test phases		
	16vehicles		
	1phase		
	1BG		
2tests	24samples per fuel		202 carbonyl samples 202 alcohol samples 159test phases for alcohols / carbonyls
	5% contingency		
	28total with contingency		
	19test phases per fuel		
	16vehicles		
	1phase		
	1BG		
	2test		
	64samples per fuel		
	5% contingency		
64total samples per fuel	68total with contingency		TOTAL COS
	34test phases per fuel		
	202 carbonyl samples		
	202 alcohol samples		
	159test phases for alcohols / carbonyls		
	64total samples per fuel		
	68total with contingency		
	34test phases per fuel		
	202 carbonyl samples		
	202 alcohol samples		

EX. 4 - CBI

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EPAct Program Cost Estimates (1/30/2008)

Category	Cost	Totals	
12/20 SWRI Proposal	Ex. 4 - CBI	-	
Spreadsheet errors in calculating the cost of exhaust gas speciation		-	
Reduction of night shift staffing from 3 to 2		\$ 3,653,610	
VOC speciation always done with alcohol and carbonyl measurements		\$ 3,784,070	
Projected additional cost of test fuels		\$ 3,990,000	Program cost recommended for approval
Phase 2 FTIR and Phase 3 E85 FTIR		\$ 4,032,000	
Alcohol measurement by Innova in Phases 2 and 3 (\$2002,8408(1007/1166)		\$ 3,856,820	Projected final porgram cost